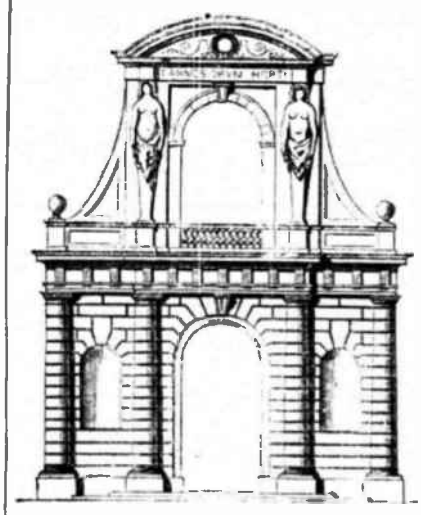
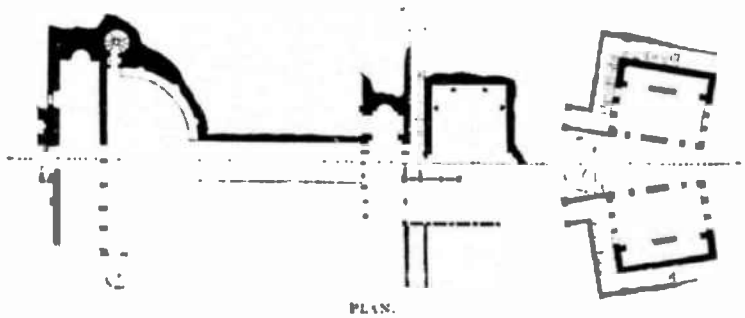
THE FARNESIAN GARDENS, ROME.

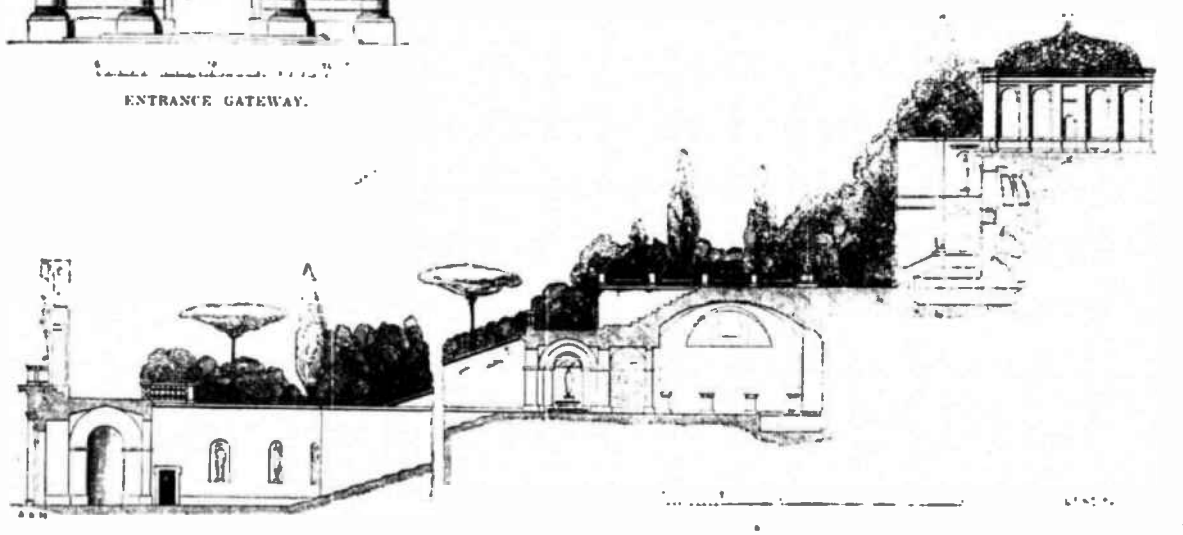
VIGNOLA AND MICHELANGELO, ARCHITECTS.



ENTRANCE GATEWAY.



PLAN.



SECTION.

race, with its semi-dome and rock-work basins are considered to be the work of Michelangelo, as also the flights of steps which, winding round on either side of the pavilions, lead to the upper terrace. The pavilions themselves, which served as aviaries, and crown the summit of the gardens, are the work of Rainaldi.

It will be remarked, that these buildings are placed obliquely, in order to enhance the beauty of the perspective view, as seen from the entrance gateway below.

It may be observed, that the Italian architects frequently adopted this peculiar mode of grouping buildings, with the view to add to their picturesqueness of effect, and that Bernini, in particular, often had recourse to this expedient both in the interior as well as in the exterior of the edifices which he erected.

The gracefulness of the entrance-gateway, and its fitness of expression as an entrance to a garden, cannot fail to strike the beholder. The graces of art have been lavished with a profuse hand upon this agreeable retreat, which must, in its pristine state, have resembled those enchanted abodes which are supposed to exist in fiction only. The whole composition, in fact, is the realisation of a poetical idea: its contrivers and designers were poetical beings. Those who visit Italy are made to feel how often the beauty of her landscape is increased by the magic of her architecture. Terraced or hanging gardens form a conspicuous feature in Italian landscape; and the Farnesian gardens are amongst the most beautiful of those which abound in the neighbourhood of Rome; and though now in a neglected state, afford valuable suggestions to those persons whose taste or calling leads them to attempt similar undertakings.

A. W. HAKEWILL.

PRODUCTION OF THE IONIC VOLUTE.

A MEMORANDUM.

June 5th.—This day I first drew a spiral revolution for a volute on the principle of having the apparatus fixed to the eye or centre. I had, however, known for a year, the motion which produced it; but I had no apparatus to carry it out, nor had it occurred to me, to *fix* one part *in* the centre of the eye. On the same day that this idea was presented to my mind, I first connected some sliding pencil sockets with strips of wood, and short pieces of pencil, and then attached a part to a fixed point to represent the centre of the eye of the volute. I now saw that it would do, and various ideas of a fixed centre occurred to me.

In the Grecian volutes it has been found that a separate piece has been inserted in the eye; and it has been conjectured from this that something had been previously introduced into the hole—it has been supposed a spiral shell, and that the volute had been formed by the unwinding of a string.

I therefore thought of a hole in the *drawing* board, in a *slate*, or in a *copper plate*, in which to fix a pin for a centre. Then in all these cases, I considered that the centre might be fixed by means of cement, without a hole, which in many cases and materials would be objectionable. I did not like to make a hole in my drawing board, and I had not anything handy or fit for the others. Next the "*weight of a pentagraph*" occurred to me. I took it out of the case, but the pin was too small for the hole in the pencil socket, but for a trial I thought it might do. I therefore cut off some slips from a card to fill the space the pin did not occupy. I then arranged my temporary apparatus, and drew the first revolution of a spiral by this means.

As soon as I had drawn this *one* line, I reflected, and considered that I ought to stop a while, and record my first impressions. I looked at the line, and at the apparatus by which it was produced; the one was so beautiful, and the other was so simple and obvious, that I felt as if I had seen it, and must have known it all before. It was so clear, that if a centre was thus fixed to a block of marble or stone, intended for a volute, a line, or part of a line might be drawn without any mould, and worked, and its accuracy tried with the greatest ease as often as might be wished; and, in fact, that the line could be continued, left off, or introduced when and where the sculptor might wish,—in short, that he or an artist on any material might design with the apparatus as he proceeded, bit by bit, in the execution of the work, during which the apparatus need never be in his way.

It was equally obvious that, where a centre could be fixed in the eye of any example of a Grecian volute in the British Museum, an apparatus might be adjusted so as to compare the path of the motion with any line, and thus prove, beyond a doubt, whether this is the identical method that was used by the Grecians or not.

It is strange, that man should know the motions in the heavens and not know this!

Professor Donaldson may perhaps remember that I measured a cast of a volute in his possession many years ago. The paper with *sixteen* radiated openings, on which the centre was marked, was applied to the centre of the eye of the volute, and then *seventeen* points in one revolution were obtained. This paper has been long lost, but I still have a slip of paper, on the edge of which, at the time, I formed a scale of the radii, and which indi-

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